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650 California Street			ART UNIT	
14th Floor			PAPER NUMBER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/784,559	Applicant(s) PUGH ET AL.	
	Examiner TED T. VO	Art Unit 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This action is in response to the amendment filed on 06/09/2008.

Claims 1-14, 17-21 are in the same system. Claims 15-16 are in the same system resulted by the amendment of claim 15. Claim 22 is newly added.

Claims 11-20, 22 are subject under 35 U.S.C. 102(b).

Claim 21 are rejected under 35 U.S.C. 103(a)

Claims 11-22 are new and pending in the application.

Response to Arguments

2. The arguments to the new amended claims 11-22 have been considered but not persuasive.

The claims have been amended, particularly claim 11 is presented as follows:

*A system for debugging in more than one programming language, comprising:
a multi-language debugger, wherein the multi-language debugger debugs a source code file which contains compiled and interpreted languages;
a script engine interface, wherein a script engine communicates to the multi-language debugger through the script engine interface;
a script debug controller, wherein the script debug controller registers itself upon start-up;
a script context object, wherein the script engine can use the script context object to hold a script context;*

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a debuggable frame object, wherein each of compiled and interpreted languages are edited in the debuggable frame object;

an interface to a runtime messaging environment, wherein the interface is implemented by a runtime messaging environment that controls a running state of the script engine; and a debug commands interface.

Applicants argued,

Bogle's invention is focused on debugging an application that includes multiple program components from many different programming language sources, i.e. many different source code files, not a source code file as in claim 11.

Applicants argued,

FIG. 4 does not indicate the capability to debug multiple languages in a source code file. Bogle's col. 4, lines 10 - 19, describes a method for debugging a virtual application that includes multiple compiled and interpreted programming language statements. However, col. 4 says nothing regarding an ability to debug compiled and interpreted languages in a source code file. There is a distinction between debugging a virtual application that contains program code in several source code files versus debugging a source code file that contains compiled and interpreted languages.

It appears Applicants contended they debug multiple languages in a single source code file where the source code file contains *compiled and interpreted languages*. They contended Bogle's multiple languages debugger is considered to debug an application that includes multiple program components from many different programming language sources,

Examiner disagrees: While the debug's framework of Bogle contains all the main elements as of the claims, the argument solely alleged that the patentable distinction that is its multiple languages is in a single source code file contains *compiled and interpreted languages*, and the prior art is to debug an application of multiple program components. Applicants' arguments can not point out any patentable distinction between the debugs, except a generic allegation.

Suppose that the components of the prior art are not in the same file as applicant argued, but they when they are compiled, they are placed in a single debugged application at runtime (See Abstract). Both the prior art and application have the same cause and effect that are both

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debug software with multiple languages. Even Applicants contend a separation of components, it should be noted in MPEP 2144, it addressed, CHANGES IN SIZE, SHAPE, OR SEQUENCE OF ADDING INGREDIENTS does not make patentable difference over a prior art.

Bogle (Abstract):

“An active debugging environment for debugging a virtual application that **contains program language code from multiple compiled and/or interpreted programming languages**. The active debugging environment is language neutral and host neutral, where the host is a standard content centric script host with language engines for each of the multiple compiled and/or interpreted programming languages represented in the virtual application. The active debugging environment user interface can be of any debug tool interface design. The language neutral and host neutral active debugging environment is facilitated by a process debug manager that catalogs and manages application specific components, and a machine debug manager that catalogs and manages the various applications that comprise a virtual application being run by the script host. The process debug manager and the machine debug manager act as an interface between the language engine specific programming language details and the debug user interface.”.

Thus, if the components of an application are not in the single file, when put in for debugging, the debugger performs on a single code file, where this single code is an integration of multiple compiled source code languages. This single code ***contains compiled and interpreted languages*** which are claimed in these current claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 11-20, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Bogle et al., US PAT. No. 6,353,923 B1.

As per claim 11: Bogle discloses

*A system for debugging in more than one programming language,
comprising:*

a multi-language debugger, wherein the multi-language debugger debugs a source code file which contains compiled and interpreted languages;

See abstract "program language code from multiple compiled and/or interpreted programming languages";

a script engine interface, wherein a script engine communicates to the multi-language debugger through the script engine interface (See FIG. 4: Between communication between #220 and #411);

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a script debug controller, wherein the script debug controller registers itself upon start-up;

a script context object, wherein the script engine can use the script context object to hold a

script context (See col. 3:30-51, See Term Definition, col. 7: See FIG. 4: e.g. #411 and #410);

a debuggable frame object, wherein each of compiled and interpreted languages are edited in the debuggable frame object; (Fig. 4)

an interface to a runtime messaging environment, wherein the interface is implemented by a

runtime messaging environment that controls a running state of the script engine (Fig. 4); and

a debug commands interface (Fig. 4).

As per claim 12: Bogle discloses *The system of claim 11, wherein the multi-language debugger is extensible to support additional languages.* (See the system of FIG. 4, and the statement in col. 4:10-19, debugging a multiple language application”, multiple compiled..., etc. This debugging environment is extensible).

As per claim 13: Bogle discloses *The system of claim 11, wherein the multi-language debugger uses **Debugging Interface*** (Improper claiming for using other product that does not come from “invention”. Using SUN product JDI, the claims admitted SUN invented this claimed feature – In the mean time; see the interface environment in this reference).

As per claim 14: Bogle discloses *The system of claim 11, wherein variables are inspected for each language* (See term definition, col. 7, Expression context).

As per claim 17: Bogle discloses *The system of claim 11, wherein the multi-language debugger interacts with the runtime messaging environment* (See FIG. 3, FIG. 5, #512).

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As per claim 18: Bogle discloses *The system of claim 17, wherein debugging is performed on a server side of the runtime messaging environment* (This reference can do this claim, see entire reference).

As per claim 19: Bogle discloses *The system of claim 18, wherein the runtime messaging environment performs debugging using a Platform Debugging Architecture* (Improper claiming for using other product that does not come from “invention”. Using SUN product, JPDA, the claims admitted SUN invented this claimed feature – In the mean time; see the runtime environment in this reference).

As per claim 20: Bogle discloses *The system of claim 11, wherein the script engine has a static constructor load the script debug controller* (Refer to debugging time, compiling time; for example see “LOAD”, then “RUN”).

As per claim 15: Regarding the limitations recited in the claim 15: The same reason set for this claims as addressed in the rejection for claim 1.

As per claim 16: Bogle further discloses *The system of claim 15, wherein the script engine interface can be used by the multi-language debugger to communicate metadata to the proxy* (See descriptions start at col. 38 and through).

As per claim 22: Regarding the limitations recited in the claim 22: The same reason set for this claims as addressed in the rejection for claim 1.

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A person shall be entitled to a patent unless –

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bogle et al., US PAT. No. 6,353,923 B1.

Given the broadest reasonable interpretation of followed claims in light of the specification.

As per claim 21: Bogle discloses the “script debug controller” (see FIGs. 3-4: For example, a Machine Debug Manager) receives information from the script engine (See Reference numbers: 420-423).

Bogle does not explicitly address the information as descriptive materials covered by limitations:

a) language extensions for each language;

b) classes that implement the script engine;

c) information on optional capabilities for each language; and

d) language name.

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It should be noted that a limitation in claim, which recites the data or information where the limitation does not perform any particularly functionality in the claim, is considered as non-functional descriptive material.

The information recited by the Reference' controller is obviously conforming to the standard of the source file in which it is carried out for debugging. It cannot be patentable distinct.

(Cf. In re Gulack, 703 F.2d 1381, 1385, 217 USPQ 401,404 (Fed. Cir. 1983) (when descriptive material is not functionally related to the substrate, the descriptive material will not distinguish the invention from the prior art in terms of patentability)).

Therefore, it is obvious to the ordinary in the art at the time of this filing application, to know that the nonfunctional descriptive materials are merely descriptions as information for describing the type of languages that is necessary in a multiple-languages debugger. It is obvious to include the descriptions because it is a requirement, and will help the controller or the user in providing programming language specific decision which is passed through debugging process as subject in the PDM 424.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (571) 272-3706. The examiner can normally be reached on 8:00AM to 4:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708.

The facsimile number for the organization where this application or proceeding is assigned is the Central Facsimile number **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTV
August 15, 2008

/Ted T. Vo/
Primary Examiner, Art Unit 2191